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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/034,680	12/19/2001	Elisabeth Soubelet	14XZ00155	2348
7590	11/12/2004			
Jay L. Chaskin General Electric Company 3135 Easton Turnpike Fairfield, CT 06431-0001			EXAMINER ROSARIO-VASQUEZ, DENNIS	
			ART UNIT 2621	PAPER NUMBER

DATE MAILED: 11/12/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/034,680	Applicant(s) SOUBELET ET AL.	
	Examiner Dennis Rosario-Vasquez	Art Unit 2621	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 19 December 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 12/19/2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>12/19/01</u> | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Priority

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Drawings

2. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the following reference sign(s) mentioned in the description:

Fig. 3 is missing reference numeral 4.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

3. The disclosure is objected to because of the following informalities:

Page 2, paragraph 9: "displayed embodiment" ought to be amended to "displayed according to an embodiment".

Page 3, paragraph 14, line 10: "In of Figure 1" ought to be amended to "In Figure 1".

Page 4, paragraph 16, line 2: "jAs" ought to be amended to "As".

Page 4, paragraph 18, line 8: "arrows 12" ought to be amended to "arrows 16".

Page 6, last line: "At step 13" ought to be amended to "At step 30".

Page 7, paragraph 22, line 15: "At block 32" ought to be amended to "block 42".

Appropriate correction is required.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1-20 are rejected under 35 U.S.C. 102(b) as being anticipated by Spivey et al. (US Patent 5,712,890 A).

Regarding claim 1, Liu et al. discloses a method for displaying digital images of a body part or parts, comprising the steps of:

a) defining a region of interest (Fig. 3a,num. 1) on each image (Fig. 3a contains images PANE1 through PANE 4 where each image contains region of interest 1) embracing the body part (Fig. 3a, NOMINAL CHEST WALL and numeral 1 of figure 3a.);

b) aligning (fig 15 shows 4 images that correspond to the above panes that are aligned in figure 16.) the regions of interest (Fig. 3a,num. 1); and

c) simultaneously displaying (fig. 17 is a display of the four images.) the images (Fig. 3a contains images PANE1 through PANE 4 where each image contains region of interest 1.) with the regions of interest (Fig. 3a,num. 1) aligned (fig 15 shows 4 images that correspond to the above panes that are aligned in figure 16.)

Claim 2 was addressed in claim 1.

Regarding claim 3, Liu et al. discloses the method of claim 1 wherein the region of interest (Fig. 3a,num. 1) is a rectangular region (Using figure 3a, PANE 1 through PANE 4 is a rectangular region that contains the region of interest of fig. 3a,num. 1.) of the image (Fig. 3a contains images PANE1 through PANE 4 where each image contains region of interest 1.) of a minimum (Fig. 3a and 3b num. 1 is a minimum surface area selected using material 2 as described from col. 4, line 59 to col. 5, line 13.) surface area (Fig. 3a and 3b ,num. 1) to cover the body part (Fig. 3a, NOMINAL CHEST WALL and fig. 3a, num. 1.).

Claim 4 was addressed in claim 3.

Regarding claim 5, Spivey et al. discloses the method of claim 1 wherein the images are displayed side by side and in which the alignment comprises the steps of:

a) comparing (Equation 4 in column 9 compares or correlates two images I_1 and I_2 in col. 9, lines 32,33) a vertical dimension (Equation 4 is a function of "y" or a vertical dimension as shown in figure 6b and is a result of obtaining the maximum correlation in the dimension, " y_1 " in col. 9, lines 39-43. Note that the maximum correlation corresponds to an alignment of images I_1 and I_2 .) of the region of interest (Fig. 3a, num. 1 is contained in PANE 1 which corresponds to image I_1 .) on each image (Fig. 3a contains images PANE1 through PANE 4 where each image contains region of interest 1.), and

b) if the vertical dimensions are identical (Each pane has a size of $N \times N$ in col. 9, lines 8,9.), performing vertical alignment ("Registration of Images") of an upper (Using figure 6a, a mark 81 of pane 1 is aligned with mark 81 of pane 2.) or lower edge of the regions of interest (Fig. 3a, num. 1 corresponds to pane 1 of figure 6a.).

Claims 6 and 7 were addressed in claim 5.

Regarding claim 8, Spivey et al. discloses the method of claim 1 wherein the images are displayed side by side, and in which the alignment comprises the steps of:

a) comparing (Equation 4 in column 9 compares or correlates two images I_1 and I_2 in col. 9, lines 32,33) a vertical dimension (Equation 4 is a function of "y" or a vertical dimension as shown in figure 6b and is a result of obtaining the maximum correlation in the dimension, " y_1 " in col. 9, lines 39-43. Note that the maximum correlation corresponds to an alignment of images I_1 and I_2 .) of the region of interest (Fig. 3a, num. 1 is contained in PANE 1 which corresponds to image I_1 .) of each image (Fig. 3a contains images PANE1 through PANE 4 where each image contains region of interest 1.);

b) if the vertical dimensions are different (If the correlation function is not at a maximum...), calculating an optimization criterion (...The correlation function calculates a maximum value "y".) which is a function of relative image position (Image I_1 is correlated with image I_2 to obtain an offset in the vertical direction in col. 9, lines 44,45.) and

c) aligning the images (Fig. 3a contains images PANE1 through PANE 4 where each image contains region of interest 1.) while maximizing this criterion (The correlation function determines a maximum value that aligns the images in col. 9, lines 32-43.).

Claims 9,10,11,12 and 13 were addressed in claim 8.

Regarding claim 14, Spivey et al. discloses the method of claim 8, wherein calculation of an optimization criterion (...The correlation function calculates a maximum value "y".) comprises aligning body part contours (Fig. 15 shows contours that correspond to a body part and aligned shown in figure 16 using the correlation function.).

Claims 15 and 16 were addressed in claim 14.

Regarding claim 17, Spivey et al. discloses the method of claim 1 further comprising, prior to the display step (fig. 17 is a display of the four images), enlargement (The images of PANE 1-4 are enlarged in col. 4, lines 12,13 and 24.) of the images (Fig. 3a contains images PANE1 through PANE 4 where each image contains region of interest 1.) using a common magnification factor("magnification of 1.35" in col. 4, line 18.).

Regarding claim18, Spivey et al. discloses the method of claim 17, wherein the region of interest (Fig. 3a,num 1) of each image (Fig. 3a contains images PANE1 through PANE 4 where each image contains region of interest 1) after enlargement (The region of interest is enlarged each time an image is captured by an input device.) is contained within the image displayed (fig. 17 is a display of the four images.)

Regarding claim 19, Spivey et al. discloses an apparatus for simultaneously displaying digital images of a body part or parts, comprising:

- a) a unit (Fig. 1, num. 13 is a ccd in col. 4, line 11.) for digital image acquisition;
- b) an image processing unit (fig. 1, num. 16:ELECTRONICS) receiving digital images supplied by the acquisition unit;

display device (Fig. 1, num. 20:HIGH RESOLUTION DISPLAY) for simultaneously displaying digital images (fig. 3a contains 4 images.) processed by the processing unit (fig. 1, num. 16:ELECTRONICS), wherein images image processing unit (fig. 1, num. 16:ELECTRONICS) comprises:

- a) a region of interest defining block (fig. 3a, label: PANE 1 is an image in col. 4, lines 60,61.) for defining a region of interest (Fig. 3a,num. 1) in an image; and
- b) an alignment block (fig. 3a, label :OVERLAP 8-11% is a block that is used for aligning.) for aligning the regions of interest (Fig. 3a,num. 1) of [the] two images (PANE 1 and PANE 2).

Regarding claim 20, Spivey et al. discloses the apparatus of claim 19, wherein the image processing unit (fig. 1, num. 16:ELECTRONICS) further comprises an enlargement block (Fig. 1, num. 8 is a screen for enlarging an image from a size of 1.84 cm X 2.76cm to 7.7 cm X 10.5 cm in col. 4, lines 12-14 .) for enlarging the digital images using the same magnification factor (A "magnification of 1.35" is obtained using the screen 8 of figure 1 in col. 4, lines 16-19.).

Conclusion

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Giger et al. (US Patent 5,832,103 A) is pertinent as teaching a method of selecting a minimum or effective area in col. 5, lines 26-47.

Liu et al. (US Patent 5,572,037 A) is pertinent as teaching a method of combining multiple image of figure 7A to combine one image 7B.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dennis Rosario-Vasquez whose telephone number is 703-305-5431. The examiner can normally be reached on 9-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Leo Boudreau can be reached on 703-305-4706. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


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